

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-27. (canceled)

28. (previously presented) A method of cutting off a web having a basic weight and being fed at a web feeding speed between a preceding knife cylinder that carries on a peripheral surface thereof a preceding knife and a following knife cylinder that carries on a peripheral surface thereof a following knife, said method comprising:

determining an amount of cutting torque ($T_{xa}+T_{xb}$) necessary for the knives to cut off the web, based on the basic weight and the feeding speed of the web;

while the web is being cut during a cutting period from a cutting start time (t_c) to a cutting completion time (t_o), driving the following knife and the preceding knife respectively with a first torque component T_{xa} and a second torque component T_{xb} of the cutting torque in the direction in which the preceding knife and the following knife are pressed against each other, wherein the first torque component T_{xa} and the second torque component T_{xb} have opposite signs; and

during the cutting period between the cutting start time (t_c) and the cutting completion time (t_o), varying an absolute value of the first torque component T_{xa} or the second torque component T_{xb} .

29. (previously presented) A method as set forth in claim 28, wherein said varying comprises:

raising the absolute value of the first torque component T_{xa} or the second torque component T_{xb} during an initial period of cutting the web;

lowering the absolute value of the first torque component T_{xa} or the second torque component T_{xb} during a subsequent, middle period of cutting the web; and

raising again the absolute value of the first torque component T_{xa} or the second torque component T_{xb} during a subsequent, final period of cutting the web.

30. (previously presented) A method as set forth in claim 29, wherein the absolute value of the first torque component T_{xa} or the second torque component T_{xb} during the initial period of cutting the web is 1.1 to 1.5 times T_{xa} or T_{xb} ;

the absolute value of the first torque component T_{xa} or the second torque component T_{xb} during the middle period of cutting the web is 0.6 to 0.9 times T_{xa} or T_{xb} ; and

the absolute value of the first torque component T_{xa} or the second torque component T_{xb} during the final period of cutting the web is 0.9 to 1.1 times T_{xa} or T_{xb} .

31-34. (canceled)

35. (previously presented) A method as set forth in claim 28, wherein the first torque component T_{xa} given to the following knife by a following knife driving motor and the second torque component T_{xb} given to the preceding knife by a preceding knife driving motor have different absolute values.

36. (previously presented) A method as set forth in claim 28, wherein the first torque component T_{xa} given to the following knife by a following knife driving motor and the second torque component T_{xb} given to the preceding knife by a preceding knife driving motor have the same absolute value.

37. (previously presented) A method as set forth in claim 28, wherein the second torque component T_{xb} given to the preceding knife and the first torque component T_{xa} given to the following knife have the same sign when the web is not being cut.

38. (previously presented) A method as set forth in claim 28, wherein the first torque component T_{xa} and the second torque component T_{xb} are applied to drive the following knife and the preceding knife, respectively, before the knives contact each other, thereby preventing inverse edges from occurring at the initiation of the cutting of the web.

39. **(currently amended)** A method as set forth in claim 28, wherein absolute values of the first torque component T_{xa} and the second torque component T_{xb} are smaller than absolute values of torque amounts necessary for acceleration [[and]] or deceleration of the cylinders.

40. (previously presented) A method as set forth in claim 28, wherein, while the web is being cut during the cutting period between the cutting start time (t_c) and the cutting completion time (t_o), the preceding knife moves backward whereas the following knife moves forward, thereby minimizing influence of the cutting operation on the web feeding speed.

41. (previously presented) A method as set forth in claim 28, wherein the second torque component T_{xb} given to the preceding knife by a preceding knife driving motor is varied in accordance with a torque pattern that is generated based on (i) the feeding speed of the web and (ii) the web's length to be cut off.

42. (previously presented) A method as set forth in claim 41, wherein said torque pattern is a pattern having a rectangular shape, a trapezoidal shape, or another polygonal shape.

43. (previously presented) A method as set forth in claim 41, wherein said torque pattern is changed depending on the web's feeding speed.

44. (previously presented) A method as set forth in claim 41, wherein the torque pattern of the second torque component T_{xb} given to the preceding knife by the preceding knife driving motor is identical to that of the first torque component T_{xa} given to the following knife by a following knife driving motor.